ON SCENE

U.S. Department
of Transportation

**United States
Coast Guard**

2/89

COMDTPUB P16100.4

ON SCENE

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RADM Robert T. Nelson
Chief, Office of Navigation Safety and Waterway Services

CAPT D. R. FREEZER
Chief, Search and Rescue Division

ENS K. N. SCHILLING
Editor

Mrs. Willie Mae Foster
Ms. Mary Abraham
Ms.Teresa Stevenson
Typists

COVER: ***USCG Auxilliary vessel 'LADY IRENE" used as a search target during the evaluation of HU-25B radars. Story on page 19***

ON SCENE is a quarterly, authorized, special interest publication, produced by the Office of Navigation, Safety and Waterway Services for members of the U.S. Coast Guard and the SAR community. Editorial content is not to be considered as authority for official action, nor as record material. Individual views and opinions expressed do not necessarily reflect those of the Department of Transportation or the U. S. Coast Guard.

Letters to the Editor

Dear ON SCENE Editor,

There are many things that need to be talked about concerning survival gear that is worn on open boats. In your 3/88 issue, you answered my questions about headphones for the SRBs and now I will ask you to answer one more question for me.

Why aren't dry suits authorized for boat crews of open boats?

When I went through the National Motor Lifeboat School (NMLBS) last year I was asked to try out some of the different dry suits that they were experimenting with. I wore a dry suit for underway operations and after a month of testing it I was sold. I didn't get wet, cold, hot, uncomfortable (for the most part), and it took me less time to get out of it than it took the other students to get out of their anti-exposure coveralls.

A few other students also tried the dry suits and got similar results. Do you think that all of this research will soon lead to Commandant authorizing the suit in the near future?

The English have worn dry suits for many years. Why must we be so far behind the times?

Many thanks,

BM3 Chris A. Warton
USCG Station Fort Point
San Francisco, CA

Dear Chris,

Thanks again for another letter. You pose several excellent questions.

The testing you spoke of at the NMLBS was sanctioned and financially supported by the Search and Rescue Division (G-NRS) at CG Headquarters. This division has responsibility for rescue and survival equipment for all surface units.Desirable characteristics for the dry suits are being compiled and guidance for selection of a dry suit is being drafted. In addition, the NMLBS, in conjunction with Commandant, is preparing instructions regarding use, maintenance, "care and feeding" of dry suits. These will all be reflected in a change to the CG Rescue and Survival Systems Manual which will authorize the use of dry suits aboard open boats.

Currently, we do not anticipate individual issue of dry suits...it is just plain cost prohibitive. Because of the variety of sizes and the ability of the suit to "seal out" the environment, a unit may only need to procure 5-8 suits. This should be adequate to outfit a crew of three aboard an SRB or RHI.

Of all the open boats operated by the Coast Guard, the Surf Rescue Boat (SRB) is probably the most "wet". Since the cost of a dry suit is on the expensive side, G-NRS is trying to identify funds for stations operating these boats.

CWO Steve Seybold, G-NRS

and is an open discussion of feelings or emotions experienced by the crew. An article describing critical incident stress debriefing was reprinted in the April, 1986 "ON-SCENE". The principles have remained unchanged and need to be actively implemented as part of our SAR operations.

A professional counselor or psychologist not involved in the rescue is the best person to lead the session. The discussion is not a critique. It must be entirely non-judgemental and no one should be criticized. Emotions are not right or wrong, correct or incorrect. Rescuer's feelings about the incident need to be talked about and shared with other members of the crew.

Failure to encourage rescuers to express their feelings in a non-threatening atmosphere may result in complicated long term emotional problems, not just affecting the rescuer's job performance but also the rescuer's family relationships.

I used to have doubts about the need for CISD in the Coast Guard, but several experiences during my present tour have convinced me beyond doubt that there are many incidents where operational units should have obtained CISD services for their crews. It is the responsibility of COs, OICs, coxswains, aircraft commanders, ops officers, and flight surgeons to be vigilant for stressful incidents and ensure that CISD is provided for crews. Local fire and police departments should be contacted to identify sources of CISD providers and your Coast Guard health services department representative should assist you in arranging CISD. Post-traumatic stress disorder is a recognized psychological problem and authorized costs for providing care to active duty personnel are funded by health services operating funds. Providing CISD will improve the quality of life for our personnel and will also improve the Coast Guard's operational readiness by ensuring that our boat and air crews are always mission ready - physically and mentally.

CRITICAL INCIDENT STRESS MANAGEMENT

**By: Jeffrey T. Mitchell, Ph.D., Associate Professor,
Dept. of Emergency Health Services,
University of Maryland, Baltimore County**

Editor's Note: The following article was printed in the 4/86 edition of ON SCENE with permission from September/October 1986 RESPONSE! c 1986, Jems Publishing Company, 215 S. Highway 101, Suite 100, Solana Beach, CA 92075.

"Critical Incident Stress Management" was reprinted to be incorporated with LCDR French's article for further information.

Prior to the mid-70s, very little was thought or written about search and rescue stress (or any emergency stress for that matter). It is not that stress didn't exist then. It did in the same way it does now and it was just as destructive to SAR people then as it is today. So, why all the fuss about stress now? What has changed?

What has changed over the last two decades is knowledge and attitudes. Stress has come out of the closet. It took a while for the knowledge about stress to filter down to the average person in the street, but the work begun in the 1920s by the eminent physiologist, Hans Selye, has been proven over and over. Excessive stress can be very harmful to the health of human beings and other living things. Repeated studies have shown that physical and psychological stress can produce cardiovascular

problems, ulcers, diabetes, cancer, and increased general illness. In addition, it can cause anxiety, depression, irritability, apathy, frustration, anger, and grief reactions, among other psychological reactions. Researchers have also found that the ability to remember, think clearly, make decisions, and perform calculations and other higher cognitive functions is

impaired by stress. Stress is also a prime suspect in the increase of emergency workers' marital discord (which further complicates work stress), changes in one's personality, and suicide.

Research has also demonstrated that rescue personnel are not exempt from the effects of stress. They are as vulnerable as anybody else.

That is the knowledge part. Attitudes have undergone dramatic changes as well. Command officers and unit personnel have opened up to greater expression of feelings and reactions in themselves and their personnel. There is less criticism and abuse aimed at those who have normal reactions to totally abnormal events. The "John Wayne Syndrome" (the "I ain't a hurtin' unless the bone is a showin'" concept) is gradually fading away. The truth is spreading that normal people have normal reactions all of the time and that crying and feeling bad or overwhelmed over something, is far healthier than never feeling anything.

These include: 1) **EMOTIONAL** - Anticipa tory anxiety, denial, generalized anxiety, panic reactions, shock, fear, survivor guilt uncertainty, intensified emotional reactions, depression, grief, and inappropriate emotions; 2) **COGNITIVE** - blaming someone, confusion, poor attention span, difficulties with decision making, heightened or lowered alertness, increased or decreased awareness of surroundings, increased vigilance; 3) **BEHAVIOR AL** - change in activity, change in speech, withdraw al, angry outbursts, suspiciousness, change in communications, change in interactions with others, increase or decrease in food consumption and/or alcohol consumptions, disrupted sleep, intensified sleep and or fatigue, more frequent visits to physi cians for nonspecific complaints, over-active vigilance to environment, changes in overall health; 4) **PHYSICAL** - dizzy spells, headaches, muscle tremor/cramp, fatigue, twitches of eyes, nausea, blurred vision, difficulty hearing, diarrhea, excessive thirst, chills, profuse sweating, shock symptoms, chest pain, and difficulty breathing.

There are so many things which can be done to mitigate stress for SAR personnel. Here are some practical suggestions which may be helpful. They are divided up into two categories - suggestions for helping victims cope with their stress and suggestions for the SAR personnel.

ASSISTING VICTIMS.

Before, during, and after a SAR, keep the family members and close friends of the lost person apprised of the steps which are being taken to find, care for, transport, protect and otherwise assist the victim. Anxious people are starving for information. Regular, accurate, verifiable information is extremely important. If you don't provide official information, family members and friends will grab onto any rumor or distorted piece of information that happens to appear.

Appoint one SAR official to perform the task of family liaison. Too many officials in contact with the family members produces confusion and feelings of insecurity in the victims or family members and leaves SAR personnel open to stating contradictory information.

Acknowledge the fears, anger and anxieties of the victim's family and friends. Early acknowledg ment and acceptance of even uncomfortable feelings can do much to prevent the potential for disturbing family interference in the later stages of a SAR.

Keep the media away from the family members to avoid intensifying their stress.

Provide safe, quiet, private places where families can gather.

Take care of the basic needs of family members such as warmth, shelter, food, etc.

Group the family members together. In situations where the family is large and where family members are disruptive, advise the family that you will share all information with one member who can then act as a family spokesman/liaison.

Once you have located the victim(s), assist them in orienting themselves to place and time. Tell them approximately where you are, how long they have been missing, the current date and the time. People lost in wilderness areas are at times quite out of touch with time.

Talk to the victims. They need lots of reassur ance and guidance. This is particularly important if they have been injured.

When appropriate, a gentle touch of the person's hand or shoulder may be extremely helpful.

Tell victims what you plan to do before you do it. Surprises are not a good idea for a traumatized person who is very anxious.

Discuss strategies and techniques with the victim when appropriate. Relaying summary of the plan before it is initiated can do much to encourage cooperation from the victim.

Little kindnesses such as retrieving and protecting the victims's equipment are very much appreciated.

Encourage the victim to express themselves and to talk to you whenever they wish.

Be honest. Any falsehood may complicate the situation later. You don't have to provide the victim with every minute, detail, but be honest in whatever you do say to them. If you don't know something for sure, tell the victim that and try to assure them that you will get that information for them as soon as possible.

ASSISTING SAR PERSONNEL

Brief all personnel before deploying them to the field. Cutting back on surprises can be a definite benefit for emergency workers. Surprises tend to cause shock or stunning as well as disorientation and confusion.

Make sure that personnel are properly equipped before deployment. Adding environmental stressors to the already existing pressures of SAR can have serious negative effects upon the person nel, especially if they are not prepared to manage the situation because of inadequate or insufficient equip ment.

Plan for appropriate rest breaks for all personnel including command officers. If command ers won't take a break, they will have a difficult time ordering their personnel to take a break. As the leadership goes, so goes the organization. Without appropriate rest breaks we can count on overall unit fatigue perhaps at times when they are needed most.

Rest your crews every two hours. The rule of thumb is generally a 15-minute break for every hour of work performed under intense stress. People should not have to work longer than 23 hours without a mandatory rest time.

Whenever possible, rotate assignments of crews so that they are able to avoid the boredom of repetition.

Provide adequate food, shelter, toilet facilities and communications with loved ones for workers.

Frequently update in the information being provided to emergency personnel.

When feeding SAR crews, avoid excessive sugar and caffeine, since both tend to increase stress reactions in the body. Vitamins help as a supple ment, but never as a substitute for good nutrition.

Avoid feeding SAR staff anything that is raw, burned or has a bone in it if the SAR operation is to be dealing with the dead (particularly if their bodies have been mutilated).

When possible, narrowly focus assignments. That is, if your job is only to locate dead subjects, it is usually not a good idea to handle them unless it is necessary. A dead-body removal crew may be more appropriate than a line searcher for such a task.

Cover mutilated bodies. The constant expo sure is psychologically unhealthy for emergency personnel.

Rescuers under 19 years of age tend to experience more severe psychological reactions to the dead, especially if mutilation has occurred. It is not in their best interests to be brought within a perimeter so that they can be "broken in early." The harmful psychological after effects are never worth it.

Talk about the SAR and the feelings and reactions it has stirred up shortly after the incident is over. Then plan for a formal psychological debrief ing.

Be prepared to refer people for additional psychological services should that be necessary (usually in less than 20 per cent of the workers).

Let some time pass after an event before having a critique. When a critique is held in close proximity to an event, people often feel anxious and

threatened. The facts are not always in and some people feel as though they are being interrogated. A supportive psychological debriefing should be done first and then the critique.

Organize a physical exercise session immedi ately after the SAR or within 24 hours after demobi lization. This is necessary to burn off the harmful chemicals that have mounted up in the bloodstream during the pressure of the SAR.

Periodically check SAR personnel's vital signs during the SAR and immediately afterwards. Excessively elevated blood pressures and cardiac and breathing rates may be the first signs of serious stress even for those who don't recognize or who refuse to acknowledge their stress.

THE CRITICAL INCIDENT STRESS DEBRIEFING

A critical incident stress is any event which overwhelms the capacities of a person to psychologi cally cope with the incident. It may be a large scale catastrophe like the Mexico City earthquake, but it is more likely a smaller, less dramatic event such as a missing child who turns up murdered in a wooded area. The type of event is not as important as the impact that event has on the people exposed to it. When the impact is negative and powerful, SAR people need a critical incident stress debriefing (CISD).

A CISD is a psychological and educational group process designed specifically for emergency workers with two purposes in mind. First, the CISD is designed to mitigate the impact of a critical incident on the personnel. Second, the CISD is designed to accelerate normal recovery in normal people who are experiencing the normal signs, symptoms and reactions to totally abnormal events.

The CISD is led by a trained mental health professional or a specially trained CISD team and usually takes three hours to complete. People from a given SAR gather together to discuss their reactions to a bad event. Debriefings are usually only done after powerful events – not after routine situations.

The ideal time is 24 to 72 hours after an incident although some are done earlier and others are much later.

Workers are encouraged to discuss their own feelings and reactions. The event is talked about, but not for critiquing purposes. Instead, people express them selves and their reactions to their work in the field.

The CISD is structured in the following way:

An **Introduction**, in which the ground rules, such as confidentiality, are set down.

The **Fact Phase**, in which the situation and the aspects of the situation which made it difficult to experience are briefly reviewed with an emphasis on how those facts produced emotions.

The **Thought Phase**, in which the participants are able to state their first thoughts upon exposure to the worst part of the incident.

The **Reaction Phase**, in which participants can state their overall feeling or emotional reaction to the situation.

The **Symptom Phase**, in which the group can discuss the cognitive, physical, emotional and behavioral symptoms which occurred at the scene, within a few days, or weeks after the incident.

The **Teaching Phase**, in which the group leader provides reassurance that what the members of the group are experiencing is a set of normal reac tions to a bad incident and that they are not going crazy.

The **Re-entry Phase**, is the concluding phase, in which people get a chance to ask questions and clarify what has occurred. Referrals for additional help and helpful summary statements can then be made by the leader and CISD team members.

CONCLUSION

Utilizing the suggestions made herein may do much to reduce the impact of psychological trauma on SAR personnel. It seems worth a try if we can keep good people on the line for a longer period of their lives while, at the same time, keeping them healthy.

U.S. COAST GUARD'S PHYSICAL DETECTION MODEL EVALUATED

By: Coast Guard Office of Engineering and Development Staff

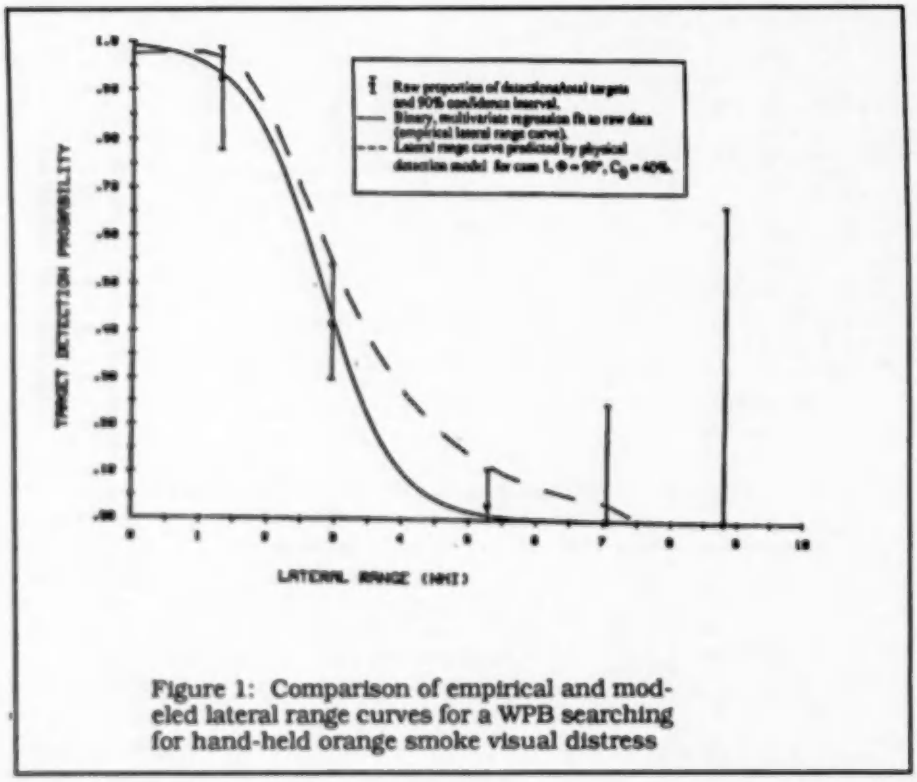


Figure 1: Comparison of empirical and modeled lateral range curves for a WPB searching for hand-held orange smoke visual distress

The U.S. Coast Guard Office of Engineering and Development has released a report titled, "An evaluation of the U.S. Coast Guard's Physical Detection Model for Visual Search," Report No. CG-D-02-89. This technical report describes the results of an evaluation of the current method used by the Coast Guard for modeling visual search/detection performance. This report is the twenty-fourth in a series which documents the Improvement in Probability of Detection in Search and Rescue (POD/SAR) Project being carried out by the Coast Guard Research and Development Center located in Groton, CT.

In 1983, an analytical method for modeling visual search/detection performance was developed for the Coast Guard. This method, known as the physical detection model, was installed in a computer software package called VSW which resides within the Coast Guard's PRIME computer facility located on Governor's Island, NY.

The evaluation analyzed the foundations of the physical detection model, its mathematical modeling approach, and its computational methods. A comparison of sweep widths and lateral range curves predicted by the model to those actually achieved during recent detection experiments was made. The results show the physical detection model is suitable for extrapolating lateral range curves and sweep widths for a limited range of daylight visual distress signals. As seen in Figure 1 the hand-held orange smoke flare prediction and experimental data follow closely, (compare the dashed line - computer predicted data to the solid line - experimentally collected data). However, this favorable comparison

did not hold true for night time visual distress signals as seen in Figure 2 where the hand-held red flare was used. Also the physical detection model presently lacks the sophistication to accurately extrapolate lateral range curves and sweep width values for daylight visual searches with substantially different search parameters. This report will be available to the general public through the National Technical Information Service, Springfield, VA 22161.

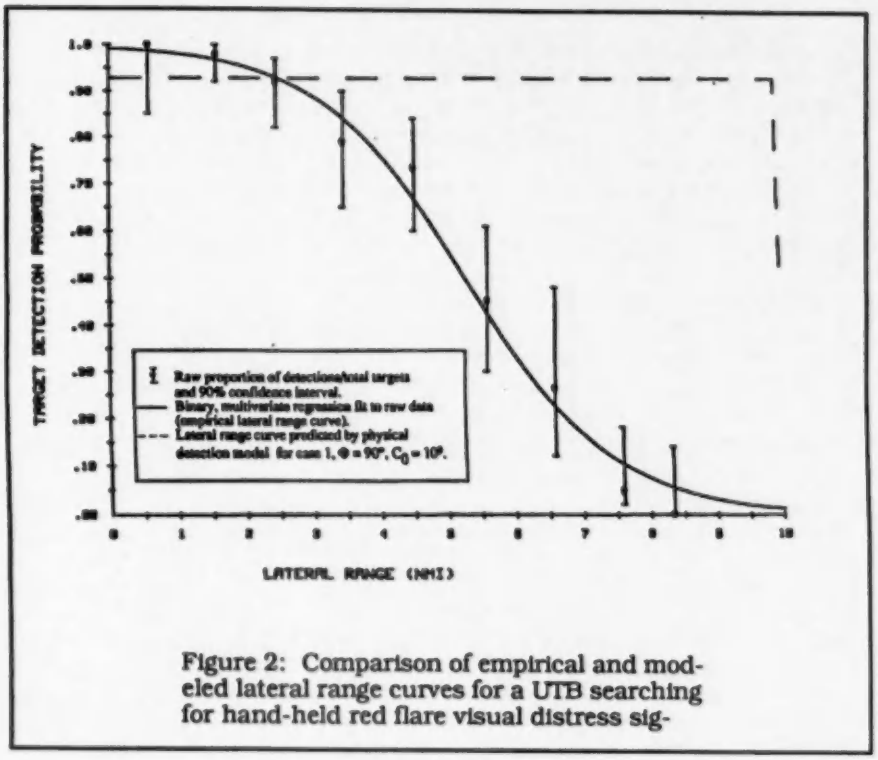

TARGET DETECTION PROBABILITY
LATERAL RANGE (NMI)
Raw proportion of detections/total targets and 90% confidence interval.
Binary, multivariate regression fit to raw data (empirical lateral range curve).
Lateral range curve predicted by physical detection model for case 1, Φ = 90°, C0 = 10°.

Figure 2: Comparison of empirical and modeled lateral range curves for a UTB searching for hand-held red flare visual distress sig-

100 YEARS AGO

US. LIFESAVING SERVICE ANNUAL REPORT 1889

A case which put the energies and fidelity of the life-savers to the severest test, and one that was characterized on their part by the highest order of heroism in the face of obstacle and danger, was the rescue of the people from the steam-schooner MENDOCINO, which stranded on the south spit of the bar of Humboldt Bay, coast of California, a little child, however, perished.

This vessel, only six months old, hailed from San Francisco, registered about two hundred and fifty tons, and was equipped with auxiliary steam power. Shortly before noon of December 22, 1888, with a load of lumber and eighteen persons on board, which included, besides the crew, the wife and child of the chief engineer, she started, without the services of a

pilot, from a point known as Field's Landing to put to sea on her way to San Pedro. It was the captain's intentions in passing out the bay to take advantage of high water which occurred on the bar between 1 and 2 o'clock. There was a strong southeast wind accompanied by drizzling rain, with a rough sea and a heavy break on the shoals. The lead was kept going, which indicated soundings from thirty-three to eighteen feet. At the latter depth it appears a big sea caught the vessel and she struck bottom. The engines were at once reversed under full pressure. She then fetched up astern, carrying away her rudder, and began to pound heavily. The steam-pipes burst and the sea current caused her bow to swing to the southward and drove her farther on the spit, where she soon commenced to leak, the water rising eighteen inches in the engine room. The spot where she brought up was not less than three-quarters of a mile from the main channel, a fact that makes it extremely doubtful whether those in charge were sufficiently familiar with the locality to justify their course in attempting to cross the bar under the conditions that prevailed

Soon after the schooner struck, the captain, with a purpose of easing her, ordered the forward lashings which confined the deck-load to be cut, but his men refused to obey, he was obliged to undertake the task himself. While absent to do this work the small boat, which had previously been cleared, was lowered, the occupants being the chief engineer, his wife and child, and four of the crew. It had not proceeded more than fifty yards when it swamped, precipitating everyone into the sea.

The schooner's peril was discovered by the man on watch at the Humboldt Bay Station (Twelfth District,) two miles northeast of the scene of the accident, who immediately gave the alarm, and the surfboat, in charge of surfman No. 1 (the keeper at time being at Eureka), was speedily launched and the life Savers set out to reach the vessel. They had a strong flood tide to contend with, which greatly augmented their labors, but caused them to work with redoubled zeal. Entering the first line of breakers they saw on the crest of the sea a boat which was right side up, but full of water, with to men clinging to it. It was evident that no time was to be lost if they were to be saved, And so the station crew, with every nerve strained to its utmost tension, shot their boat ahead by vigorous strokes through the foaming waters. They had not gone far when a heavy wave burst directly upon the swamped boat, rolled it over and over like a log, and washed the two men into the boiling surf. There was a quantity of lumber from the wreck floating about, and among this the imperiled men were now struggling. It was found necessary by the life-savers to put over the drogue, by which means they were enabled to sheer alongside the men and pick them up. These then stated that five others were in the surf, among them a women and her child. The boat was again urged onward, and the chief engineer and his wife were rescued. While the latter was crying in agony for her little one, the surfmen kept on through wave and breaker, guided by excellent steerage, toward a small object ahead. This was found on nearer approach to be the child, wrapped in a life-preserver, floating with its head under water. Just as an effort was made to grasp it a huge comber dashed it far astern. Attempts to reach it by backing the boat through the breakers proved fruitless. Here it was that Surfman John Regnier performed an act of marked heroism. Without a word of notice he sprang overboard and swam to the child, which he recovered, and after a resolute battle with the waves succeeded in bringing it to the boat. It was a feat of exceptional daring, but barren of results beyond regaining the body, as the child was already dead. No time was lost, but the boat was again urged on, and the two men remaining, who were clinging to pieces of floating timber, were saved. The rescued persons were at once taken to the station, which they reached in an exhausted condition. The prompt attention, however, shown them by the life-saving crew and neighboring residents soon revived them. Efforts begun at the first practicable moment and continued for a considerable length of time to resuscitate the child proved unavailing.

The conduct of the station men in immediately manning the surf-boat deserves the highest praise. Had they waited to launch the ponderous lifeboat, under the circumstances that prevailed, it is probable that all who were in the schooner's boat would have perished. As soon as the comfort of these people was assured the life-savers returned to the scene of the wreck.

SEARCH AND RESCUE IN THE UNITED STATES SOUTHERN COMMAND

By: TSGt Rene Zapata Jr., USAF, OL-I. HQ ARRS Howard AFB, Panama

The United States Southern Command (USSOUTHCOM) provides search and rescue assistance to U.S., military, foreign and civilian personnel and property in distress by using available U.S. forces and facilities within the Latin American theater. The amount of assistance that may be given is dependent upon the availability of U.S. military forces since there are no dedicated SAR units and on the basis of non-interference with the primary mission, the defense of the Panama Canal. SAR in USSOUTHCOM is a joint-service function and includes close coordination with the U.S. Air Force Aerospace Rescue and Recovery Service, the U.S. Coast Guard and SAR authorities of foreign nations.

The U.S. National Search and Rescue Plan names the Commander-in-Chief of USSOUTHCOM, General Frederick F. Woerner, Jr. (USCINCSO) as the Overseas Area SAR coordinator, whose primary responsibility is planning and managing resources to support SAR requirements of U.S. Armed Forces within his Unified Command's Search and Rescue Region (SRR).

USCINOSO's SRR is divided into two major SAR regions: maritime and inland. The inland SRR includes the land mass of Central and South America, extending from the border between Mexico and Guatemala to the extreme southern tip of Chile. The maritime SRR includes adjacent ocean waters in the Pacific Ocean and Caribbean Sea. There is also a Search Rescue Sector (SRS) that includes Honduras, El Salvador, and Guatemala. Since SOUTHCOM's are of responsibility overlaps those of other Latin American nations, and since SAR is the sovereign right and responsibility of a national state, USCINCSO has the ancillary responsibility of providing SAR assistance, upon request, to foreign governments within his SRR.

USCINCSO designates as the Overseas Area SAR Coordinator to the Commander U S. Southern Air Forces (USSOUTHAF)/12th Air Force, Lieutenant General Peter T. Kempf. As the Air Force Component Commander, he is responsible for maintaining a centralized rescue coordination center (RCC), as well as the authority to task resources from participating SOUTHCOM component service commanders to assist in a SAR mission. Since his headquarters are geographically separated from Panama, he has delegated SAR Coordinator authority to his in-theater representatives, Colonel Robin G. Tornow (USSOUTHAF FORWARD), and the 24th Composite Wing Commander and Deputy Commander for Operations.

The USSOUTHCOM RCC, based at Howard Air Force Base Panama, is the operated jointly by controllers assigned to the 24th Composite Wing Command Post, and the 61st Military Airlift Group Airlift Control Center. They're supervised by the Operating Location-India Headquarters Aerospace Rescue and Recovery Service (OL-I. HQ ARRS). This unique MAC-TAC arrangement is based on the fact that this is the only overseas Unified Command that doesn't have a Joint service JRCC. OL-I HQ ARRS transcends major command lines by providing the RCC with training and expertise that rivals any other RCC worldwide. Personnel assigned to OL-I are National SAR School graduates.

The Commander of OL-I, Major Michael C. Callaan, is actually dual-hatted as the USAF Search and Rescue Liaison Officer (SARLO). and as the Chief of the USSOUTHCOM RCC. As a SARLO. he serves as the staff advisor and liaison between HQ ARRS, USCINCSO and its theatre component commands for all SAR matters. In his liaison capacity, he also represents the Chief of Staff USAF as the Air Force delegate to the System of Cooperation of Latin American Air Forces as a SAR Committee member. He also serves as liaison between the USAF and friendly Latin American nations by promoting international and domestic cooperation to improve search and rescue activity in this region. He does this by staff advisory visits, exchange programs, seminars and SAR classroom instruction (in spanish) as an associate professor at the Inter-American Air Forces Academy at Albrook Air Force Station. Panama. This helps promote standardization and proficiency in RCC operations throughout the Latin American theater.

As the Chief of the USSOUTHC0M ROC, he is responsible for conducting search Mission Coordinator training and certification, providing RCC checklists, worksheets, and operating instructions for his controllers. He is also responsible for training, certification, and SAR operations at Joint Task Force-Bravo at Soto Cano Air Base, Honduras that serves as a Joint Rescue Sub- Center (JRSC) responsible for the SOUTHCOM SRS.

Although USSOUTHCOM has no dedicated SAR assets, the RCC provides all possible SAR assistance within the capabilities and availability of theater-assigned U.S. forces. Some resources used for joint SAR operations under the overall direction of the RCC are the C-130 Hercules, AC-130 Gunship, C-12 Huron, OA-37 Dragonfly, A-7 Corsair, CH-47 Chinook, UH-60 Blackhawk, UH-1 Uroquois, and OH-58 Ranger aircraft, as well as U.S. Navy and U.S. Coast Guard ships at sea. Other SAR tools such as the AMVER SURPIC and CASP messages obtained through the U.S. Coast Guard's FACSARCOORD RCC in Alameda, California and LANTSARCOORD RCC in Governors Island, New York as enhanced operations because the majority of the SAR missions are in the maritime SRR. The RCC also has HF/VHF/UHF communications. SARNET as well as direction finding capability through the U.S. Navy and Panama Center, the latter being a facility of the host country. The RCC can also request the Panama Canal Commission Marine Traffic Center to provide vessels for a search within the Panama Canal area, or request merchant vessel assistance as they transit the canal locks. In addition, the RCC has TELEX (AC.. (328) 3564 HOWARD PG), AFTN Telstype (Address: MPHOYCYX), and STU-III FAX (commercial 507-84-4652/AUTOVON 313-284-4652).

This decade. the RCC has averaged 117 incidents and 23 saves a year and since its inception in 1973, they've accumulated more than 450 saves. Since it shares boundaries with three U.S. Maritime SRRs, the RCC has close working relationships with Long Beach, New Orleans and MiaRCCs (including San Juan RSC). Most important, the USSOUTHCOM RCC and OL-I HQ ARRS have the capability of interfacing with sister Latin American RCCs so THAT OTHERS MAY LIVE.

NOTE To contact the USSOUTHCOM RCC commercially, call 011-507-84-3240; AUTOVON 313-284-3240 (through an overseas AUTOVON operator). The AUTODIN Address is USSOUTHCOM RCC HOWARD AFB PM.

To contact OL-I HQ ARRS commercially call 011-507-84-3408. AUTOVON 313-284-3408 (through overseas AUTOVON operator) and the AUTODIN Address is OL-I HQ ARRS HOWARD AFB PM//CC//. Mailing address is OL-I. HQ ARRS/CC ATTN: MAJ. CALLAHAN APO MIAMI, FLORIDA 34001-5000.

A FAMILY AFFAIR
A SWITCH IN THE SAR GAME PLAN – SINKING, NOT SAVING

By: CDT 2/C T. M. Toomey USCGA, BM3 D. M. Biles USCG, and R. Mason, Jr. USCG Aux

On 7 June 1989, the submarine USS Blenny (SS324) was laid to its last resting place 12 miles off Ocean City, Maryland. The decommissioned WW II sub was acquired by the Town of Ocean City to be used as a fishing and scuba dive site. The sub was made safe by marine contractors in Baltimore and then towed to the site of her last dive. As part of the ceremony, the town invited members of her crews to come and take part in the sinking celebration. Captain Hazzard, the Blenny's first skippper was one of the several dozen former crew members that were in attendance.

Once positioned over her appointed resting place, a Navy Ordinance Team of dive and demolition experts placed explosive charges aboard the Blenny. The former crew members, press and local dignitaries aboard their escort boats were allowed to pass in review one final time to salute the Blenny, which had earned 5 battle stars in WW II and the Korean Conflict and was credited with 67,000 tons of enemy shipping sunk or damaged during WW II. After this final salute, the charges were detonated and the Blenny began her last and final dive.

As part of the operations for the sinking ceremony, Coast Guard Station Ocean City maintained a 1,000 yard security zone around the sub during the sinking. The station's 41' patrol boat CG 41470, assisted by 4 Ocean City Coast Guard Auxiliary operational facility vessels, kept the security perimeter allowing the many excursion boats that carried people the 12 miles offshore to safely view the explosion. The 5 Coast Guard vessels were manned by active duty, reserve, auxiliary personnel, and Coast Guard Academy cadets. Also transported were local Ocean City Paramedics in case any emergency might occur. The Cadets, at Station Ocean City as part of their summer training, took an active part in the operation.

Chief Spainer, Officer–in–Charge of Station Ocean City said of the sinking, "The personnel and units participating in the operation performed their tasks with great dispatch and because of their good work, our part of the ceremony was accomplished without a hitch. The highest spirit of cooperation among the members of the Coast Guard family in performing our varied duties was exemplified by the successful and safe completion of the sinking of the submarine USS Blenny today off Ocean City. This was another job well done. It was both fun and very interesting to be involved with helping a vessel sink rather than saving it, because in this case no lives were at stake."

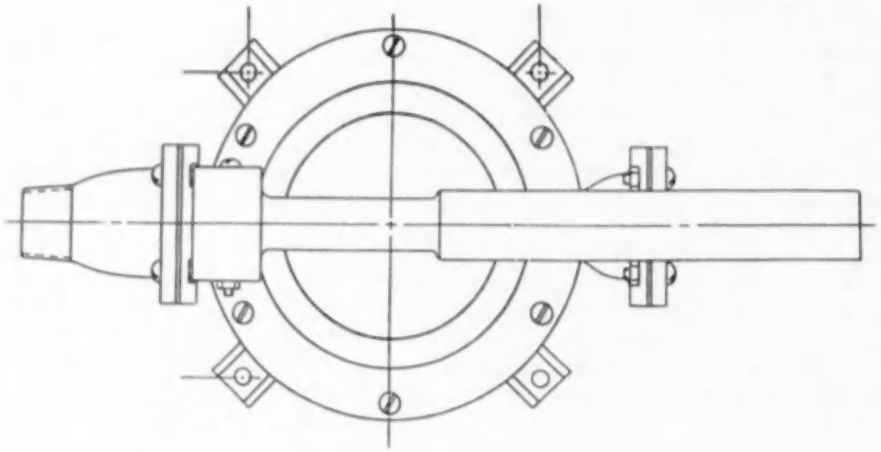
The news media reported that one Coast Guardsman was heard to say, as the Blenny made her final dive, his own farewell, "Run silent, run deep."

Now, the sub is back in her natural element, underseas, a lasting monument to those who served her, the service she did for her country, and the pleasure she will give to fishermen and divers in the future

The Coast Guard family did its part in making the operation a safe and happy final dive for the USS Blenny...a day we can all remember when we helped a noble warship find her useful last resting place.

RESCUE & SURVIVAL SYSTEMS NOTES

By: CWO Steve Seybold, G-NRS-2



(Figure 1.)

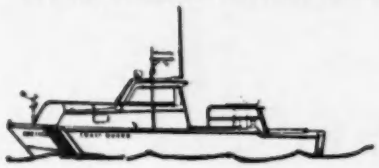
MODIFICATION OF DEWATERING PUMPS

The last issue of ON SCENE provided you with national stock numbers for replacement parts for the Model CG-P1A dewatering pump. Although these parts will be stocked at Supply Center Brooklyn, they are not yet available. Orders will not be filled until the parts become available at the Supply Center. Should you find an immediate need for any of these parts, you may order them directly from the manufacturer. Contact Scot Division of Ardox Corporation at (414) 377-7000. Ask for Mr. Mark Papke...he is familiar with the modification kits and should be able to assist you.

On another note, I received some reports of problems installing the mod kits on pumps manufactured by Ohler Machinery Corporation (These pumps are currently stocked at the Supply Center and should include a modification kit in the shipping container when you requisition them). It appears the tolerances used to manufacture these pumps allow the engine to be mounted to the tubular frame at an angle. If this is done, you may find the new fuel container will not sit flush on the container's mounting bracket. If you have this problem, loosen the engine mounting bolts and realign the engine to the frame while the fuel tank is in its bracket. It should solve your problem.

The priming pump handle pivot bolt chafing against the fuel tank was identified as another potential problem. During a visit to Supply Center Brooklyn, the mounting bolt for the handle was discovered to be installed backwards on the "Ohler" pumps. The head of the bolt (screw-slot end of the bolt) should be installed through the handle so it faces the fuel container when it is installed (see Figure 1). If you find the bolt is installed backwards, remove it from the handle and turn it around. This prevents the threaded end of the bolt from chafing against the fuel container when it is installed.

BOAT CREW PROFESSIONALISM



By: CWO Jake Miller G-NRS-2

Boat Crew Professionalism Manager - that's the name of my new job. Since reporting in I've been giving a lot of thought to just what this means. I know one thing, this does not mean that I am THE boat crew expert for the Coast Guard. The experts are, and should be, the people manning the boats out at the stations and on the cutters. Part of the meaning of professionalism is to be engaged in a specific activity, such as boat crewman, as a means of livelihood. The other part, the part that will matter to us, is that a professional possesses great skill, experience and competence in a field. Examples of this are doctors, lawyers, teachers and Coast Guard boat drivers.

No individual professional can be expected to be THE expert. Some are bound to know more than others. But all are expected to exhibit a higher level of competency than the average layman. Professionals, including Coast Guard boat crewmen, should have both knowledge in their field and the ability and willingness to put that knowledge into practice in order to benefit someone else. Professional Coast Guard boat crewmen have been hired by the American public, through the Coast Guard, to man and operate boats.

My job can probably best be described as the liaison between the Search and Rescue Division in head quarters and the professional boat crewmen in the field. A liaison is, and I hope to be, the point or channel of communication between different groups of an organization. Specifically in this case, between the professionals manning the boats in the field and the managers at Coast Guard Headquarters and the training centers.

In order for this liaison to work I must hear from the professionals in the field. If I don't I won't have any thing to communicate. I don't seem to have any problem getting the people in headquarters to communicate with me, but without input from you in the field it becomes a one way street. So feel free to dial me up. The number is FTS 267-2868. If you don't have FTS the area code is (202). Or, write me a letter/note and send it to Commandant (G-NRS-2), attention CWO Miller. Also, to facilitate our communication I will continue to write this column for On Scene. As a regular feature of On Scene, it will be directed primarily at Coast Guard boat crews and their supervisors and will deal with all aspects of boat crew professionalism including: training, operations, manning, equipment, policy, lessons learned, and anything else of interest to you or I. So, let's hear from you, the professionals.

TOWING IN STEP

By: LT Bruce E. Viekman, Marine Science Section, U.S. Coast Guard Academy

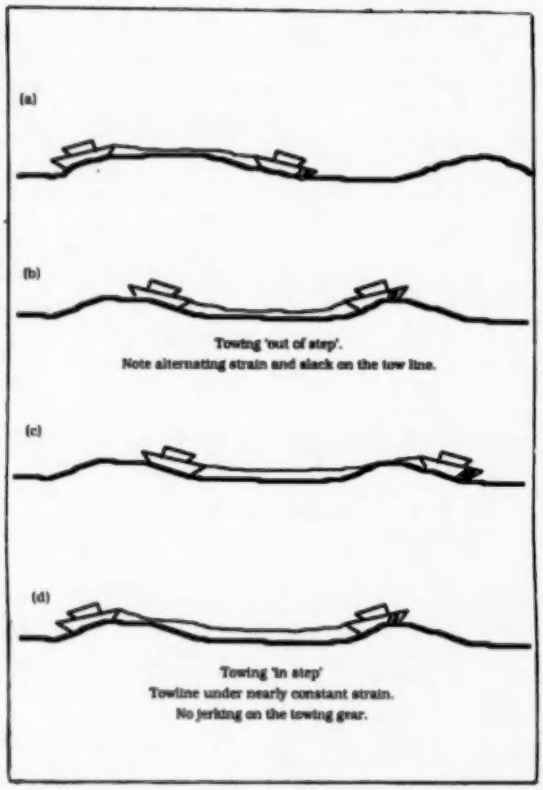
"A point of some importance in towing in a seaway is to keep the ships in step. In other words, the length of the line should be such that the ships will meet the waves and ride over them together."

Knights Modern Seamanship, Para. 11.6.

The Standard works on towing all state the importance of towing in step. The goal is simple: if both the towing vessel and the tow meet the seas simultaneously, then the stresses on the towing gear will be minimized. If the tow is rising up a wave, and the towing vessel is surfing down another, the towline will receive a sudden load. The load will later be eased as the relative position of the vessels changes on the waves. The towline alternately coming under slack, then strain, could cause damage to the gear; even loss of the tow.

Figure 1. illustrates the concepts. In Figures (a) and (b), the tow is not in step. In (a), the towing vessel is surfing down the slope of a wave, while the tow labors up the face. Here the towline is under great strain, as it both pulls the towing vessel and brakes the speed of the tow. The strain is relieved later in figure (b), as the relative position of the two vessels on the wave changes. Now the towline is slack as the tow is moving faster than he towing vessel. In figure (c), and (d), the vessels are in step, and are both on the same position on the waves. The towline is now under nearly constant strain.

None of the standard works on seamanship, however, describe how to tow in step. Most coxswains or Captains find the proper towing length by trial and error. Usually this involves progressively lengthening the tow, in seas which are often heavy, with the consequent hazards to personnel and equipment. This can often be a frustrating and dangerous way to determine the proper towline length.



(Figure 1.)

WORKSHEET FOR TOWING IN STEP

Measure the total time for 10 waves to pass a. _____ seconds

Divide line a by 10 b. _____

Multiply line b. by itself c. _____

Multiply by 5.12 d. **Wavelength** = _____ ft

Depth of water = e._____ feet

Divide depth by Wavelength e/d = _____

Depth/Wavelength	Greater than	.5	.25	.20	.15	.10	.05
Factor		1.0	.92	.85	.74	.56	.30

Determine depth factor from table above: f. _____

Multiply line d. by Depth factor (line f) g. _____

Multiply g. by 1.05 or allow for catenary h. _____

Towline should be a multiple of the value of line h. For example, if line h. equals 200 ft., then tow should be 200,400, or 600 feet.

(Figure 2)

There is a method of determining in advance the length of the towing hawser necessary to tow in step. There is a definite relationship between wave period, or the time between successive crests, and wavelength, or the distance between crests. For deep water, the wavelength equals the period (in seconds) squared times 5.12 (which represents the earth's gravity divided by a constant). Therefore an eight second wave in deep water has a wavelength of 328 feet (8x8x5.12).

Using this relationship, the coxswain/OOD could determine, in advance of hooking up, the proper towline length. A recommended procedure would be for the Coxswain/OOD of the towing vessel to time the passage of 10 waves to determine the average period, then calculate the wavelength. To time the waves, a stationary reference should be used, such as the disabled vessel. If the reference moves through the water, its motion relative to the sea will cause errors in the timing of the wave period. The proper length of the tow (bow to bow) would be some multiple of the wavelength and the waves would strike the two bows simultaneously. For the eight second waves mentioned earlier, the tow could be 325, 650, or 975 feet. The coxswain/OOD of the towing vessel would have to adjust for the expected catenary, adding about 5% to the towline length.

Unfortunately, this simple relationship of wavelength = period squared x 5.12 becomes more complex as the water shoals. The wavelength of a wave becomes shorter as the water depth decreases, while the period remains constant, so an adjustment must

be made to the calculations described above. A series of factors can be applied to the deep water relationship of wavelength equals wave period squared times 5.12. These factors are given on the worksheet, *(Figure 2)*, which has been prepared to give a step by step procedure to use when calculating how long a towline should be.

In calm conditions, towing in step is low on the coxswain/OOD's list of concerns. In rough weather, the length of the towline could determine the success of the mission. Calculating the length of the tow in advance could reduce the hazards to both equipment and personnel on a tough case.

For those mathematically minded, the full relationship is $L2/T2 = gL/2$ (tanh 2 h/L), where L is the wavelength, T is the wave period, h is the water depth, and g is the acceleration due to gravity (32.2 ft/sec2). The deep water case described above is the limiting case of the full relationship as h becomes large.

CHECKLISTS AND THE TELECOPIER

By: LCDR P. L. BARGER G-NRS-1

GANTSCEC San Juan demonstrated a new method of passing information between vessels in distress and the coordination center. The FAX permitted the rapid exchange of information without loss of content. In cases where there are no English speaking crewmen available, the use of the FAX and prepared questionnaires/instructions could provide directions in the language of the master.

The Greater Antilles Section SAR Mission Coordinator made good use of a telecopier recently. The owner of a vessel crewed by non-English speaking people relayed a medical incident to the SRCC in San Juan. The MEDEVAC/MEDICO checklist was sent to the owner by telecopier, thus reducing the time needed to gather the information through a third person. We avoided extra workload at CAMSLANT, and reduced the number of costly high seas operator and Marisat calls. This procedure would be useful in communicating with any telecopier-equipped ship. Helicopter evacuation, MEDEVAC, MEDICO, or other checklist can be passed quickly, accurately, and the receiver can refer back to them easily. Errors of voice communication transcription at either end can be avoided too. This procedure is even more useful when trying to communicate to foreign language-speaking crews.

Our AMVER program is evaluating a change to their vessel equipment checklist that would include a notation for telecopiers.

COAST GUARD R&D CENTER DEVELOPS PRELIMINARY SWEEP WIDTH TABLES FOR HU-25B "AIREYE" GUARDIAN

By: Coast Guard Research and Development Staff

Search operations conducted during periods of darkness or low visibility must be predicated on the search target being active, i.e. capable of and expected to use flares or a radio, or the search platform having an electronic search capability. For U.S. Coast Guard aircraft, electronic search equipment is limited to various radars, forward looking infrared devices, and night vision goggles. To obtain a designated probability of detection within a search area the "sweep width" of the equipment must be known.

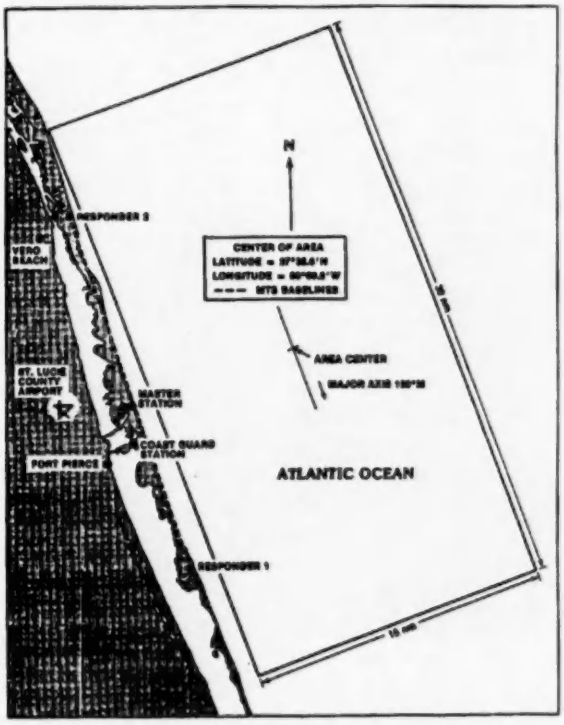


Figure 1. Exercise area off the Atlantic coast adjacent to Fort Pierce, FL

During June 1987, the U.S. Coast Guard Research and Development Center conducted a series of tests off Fort Pierce, FL, figure 1, to develop sweep width information for the radar systems aboard a U.S. Coast Guard HU-25B, "AIREYE" Guardian aircraft. The aircraft and crew were provided by USCG Air Station Miami, while some of the support and search targets, were from the U.S. Coast Guard Station Ft. Pierce, FL and Auxiliary Division 5 East. Six and ten person life rafts and twenty-four to forty-three foot recreational boats, figure 2, were used as search targets. The radar systems evaluated were the AN/APS-127 forward-looking airborne radar (FLAR) and the AN/APS-131 side-looking airborne radar (SLAR), figure 3.

Figure 2. USCG Auxilliary vessel "Lady Irene" used as a search target.

Operational radar searches were conducted to collect data using standard search patterns. Sensor operators know that targets were in the area but did not know where nor how many. Search aircraft and target positions were recorded on a continuous basis using a precision shore-based microwave tracking system. All sensor operator interactions (e.g. target detections) during the search were recorded onboard the aircraft. Sea conditions during the searches were generally less than 3 feet with winds less than 12 knots. A limited amount of data was collected in 3 to 5 foot seas with winds up to 18 knots.

As might be expected, analysis of the detection data confirmed that the probability of detecting these targets varied with significant wave height, search altitude, and target size. Sweep width tables were developed for the AN/APS-127 FLAR. Complete sweep width tables could not be developed for both radar systems because insufficient data were collected due to various factors. Subsequent to this report additional data was collected which, along with results from this series of tests, is being fused into a recommended change to the National SAR Manual. Additional information can be received from Mr. R. Q. Robe, U.S. Coast Guard Research and Development Center, Avery Point, Groton, CT 06340-6096.

The report, "Preliminary Sweep Width Determination for HU-25A* Airborne Radars: Life Raft and Recreational Boat Targets", Report No. CG-D-11-88, is available through the National Technical Information Service, Springfield, VA 22161.

*The designation of the "Guardian" aircraft was changed from the HU-25A to the HU-25B after publication of this report.

Figure 3. Antenna for AN/APS-131 radar on HU-25B Falcon.

LESSONS TO BE LEARNED

By: QM1 William R. James

During the afternoon of 30 April, 1989, USCGC NAUSHON was involved in a search for an EPIRB which the SARSAT system had detected in Clarence Strait, approximately 50 miles North of Ketchikan, Alaska. I am writing to pass on the lessons we learned.

On the afternoon of 30 April, CGC NAUSHON was returning to her homeport of Ketchikan, AK after a week-long LE patrol. We were less than 3 hours from home and anxious for liberty. At 1455 local, CG Group Ketchikan broadcast a UMIB concerning a SARSAT EPIRB alert in a position about 25 miles astern of us. We had sighted many vessels in the vicinity. We tuned our UHF guard to 243 MHz and received the EPIRB signal, but were unable to get a bearing as 110' WPBs lack UHF-DF Equipment. We diverted at near-full speed, for we were aware that survival time in Alaskan waters is extremely short.

On two previous occasions, we had lost one or both of our Class A EPIRBs overboard due to extreme icing or sea conditions. A quick check this time showed that our EPIRBs were safely stowed, so we were off to save the day.

For the next six hours we conducted shoreline and open-water searches with the cutter and our small boat. We contacted all the vessels we sighted and asked them to check their EPIRBs and to keep a good lookout for anyone in distress. Two civilian aircraft joined the search and spent over two hours each investigating inland clearings and lakes. Group Ketchikan continued to broadcast the UMIB and arranged for CG helo assistance.

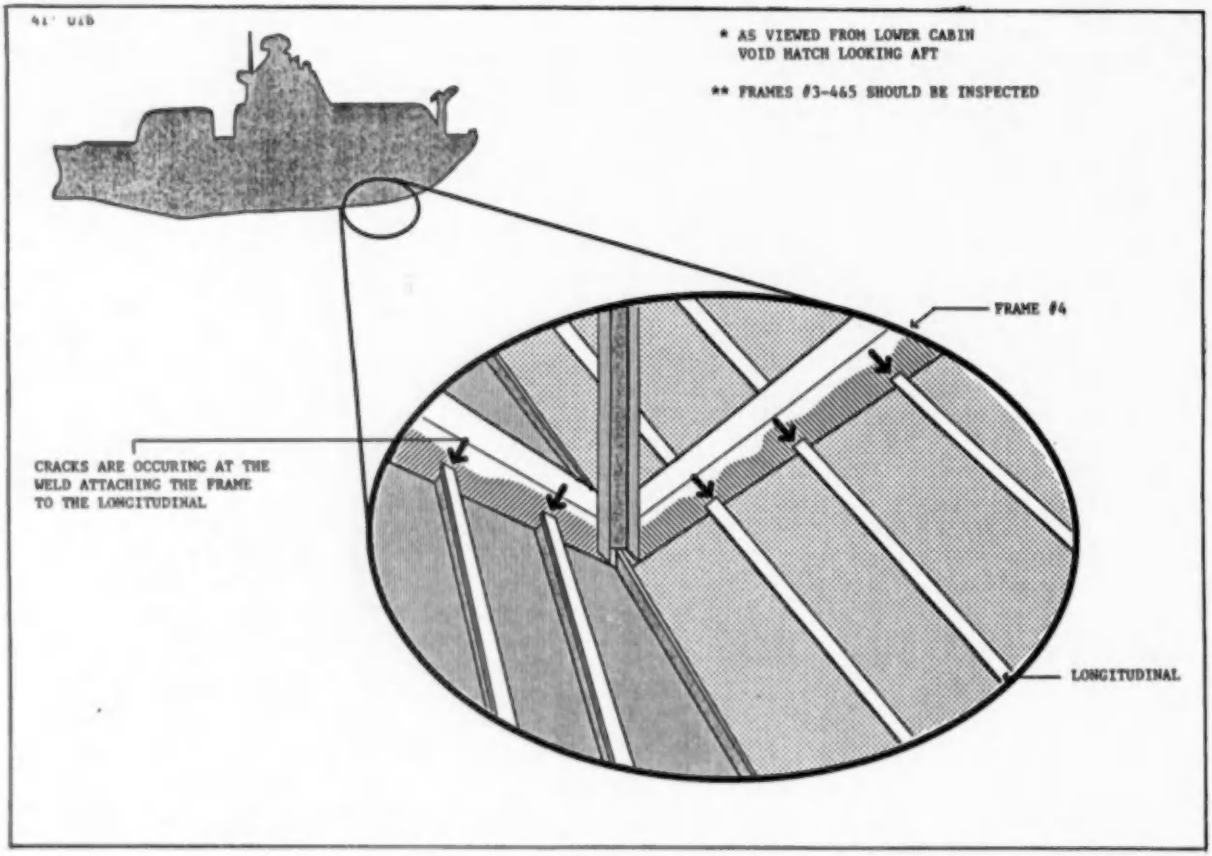
At 1930, an H-3 from CGAS Sitka arrived onscene, and began flying patterns to obtain DF bearings for a position fix on the EPIRB. About 30 minutes later, the Helo reported to us that, strange as it may seem, the signal was strongest over NAUSHON. We checked our EPIRBs again, and found that one unit was displaying its red "transmit" light while stowed in its normal inverted position. As the EPIRB was removed from its bracket, air under pressure escaped from the o-ring seal at the top of the radio. The CG helo and civilian aircraft immediately reported that they had lost the EPIRB signal. Before releasing all search units, we reconnected the battery to the EPIRB and depressed the test switch. The helo reported a brief transmission on 243MHz, then silence. This confirmed for us that we were indeed the source of the SARSAT alert. Not a little embarrassed, we released all units from search and turned-tail to head home, hours late and much the wiser.

A check of our records showed that we had purchased the offending EPIRB through Federal Supply in September 1988. We had inspected and tested the EPIRB when we placed it in service in February 1989. The unit was returned to the manufacturer, ACR Electronics of Ft. Lauderdale, FL for an inspection. This revealed that the transmitter was burned out due to heavy corrosion on the gravity activated transmitter switch. Since the transmitter is a factory-sealed unit inside the EPIRB, we were unable to check this before placing the EPIRB in service. The amount of corrosion found was more than would normally be expected after two months exposure to the elements on the weatherdeck of NAUSHON.

We suggest that anyone holding EPIRBS ensure that they are afforded dry storage. We also learned that had we followed the advice of the UMIB and checked our EPIRBs more closely, we could have avoided this waste of precious operating time and dollars.

UTB CRACKS AND PITTING

By: UTB STAN TEAM STAFF


41' UTB
* AS VIEWED FROM LOWER CABIN VOID HATCH LOOKING AFT
** FRAMES #3-465 SHOULD BE INSPECTED
FRAME #4
CRACKS ARE OCCURING AT THE WELD ATTACHING THE FRAME TO THE LONGITUDINAL
LONGITUDINAL

(41 FT UTB)

Structural cracks at the weld attaching frame members to longitudinals are occurring on many UTB's. The problem is being researched at many levels in, and out, of the Coast Guard. MK1 Griffin of the UTB Stan Team recently traveled to the Seventh District to obtain first hand knowledge of the locations and extent of the cracking found on UTB's there. He has since examined 21 other UTB's and found 16 with structural cracks in the lower cabin bilges. The cracks are occurring on UTB's with and without BOATALT 41'-UTB (X) - 45 STRUCTURAL REINFORCEMENT completed. The diagram of the lower cabin bilge shows the cracks are located at the weld bead where the frame and longitudinals meet at frames 3, 4, and 5. This area should be checked often (we recommend at least quarterly) for new cracks. These cracks are very difficult to find and often run along the outer edge of the weld. If structural cracks are found, a CSMP should be submitted to make repairs and

BOATALT 41'-UTB(X)45 should be completed.

Extensive UTB bilge examinations have revealed significant pitting problems as much as 30% or more of the original thickness throughout the forward cabin bilge. The forward cabin bilges are often overlooked during routine inspections because of the small size of the access cover and the difficulty encountered entering and crawling around. It also requires some effort to remove all the gear from the stowage area underneath the console and removing the wooden deck plates to examine the bilge area adjacent to bulkhead #6. Examining these areas is important because corrosion and dirt build up over long periods of time can result in severe pitting. Good house keeping procedures will help minimize the problem. We recommend that the bilge area be kept dry at ALL times and a monthly flushing of all bilges with fresh water and mild soap be conducted. Significant corrosion and salt build-up can occur in as little as 2 to 3 months if these areas are neglected. Another area to watch is directly under and around the shaft packing glands. The same rules apply: KEEP THE AREA CLEAN AND DRY.

HALON BOATALT 41' UTB (A) - 56, issued in March 1983, required the installation of the HALON 1301 Fire Extinguishing System according to reference plan 41'-UTB-9300-1. In May, 1985, BOATALT 41' UTB (A) -56 AMENDMENT #1 modified the HALON system installation for safety reasons. Amendment #1 moved the discharge piping in the engine room nine inches off center to starboard and required a push button alarm test switch be installed on the control console. Some of the UTB's examined were missing the required push button alarm switch. If the switch has been omitted on your UTB, we recommend corrective action be taken as soon as possible.

1989 SAR CONFERENCE

By: CDR Greg Ketchen (G-NRSa)

Thursday afternoon plenary session at the 1989 SAR Conference

This past March, senior SAR officers, District OPCEN controllers, and various SAR support personnel met in Alexandria, Virginia, for 3 days to discuss SAR issues and share their experiences solving SAR-related problems. The agenda included a mix of workshops and plenary sessions covering topics ranging from SAR policy to advances in search technology. The conference provided an opportunity for the leaders of the Coast Guard SAR community to interact, learn about each other's priorities and concerns, and better understand the present state and future of the SAR program. This was the first national Coast Guard SAR conference to be held since the mid-70s.

The following is a synopsis of some of the more important topics and observations made during the 1989 conference:

OVERVIEW: The Coast Guard SAR program continues to work well but some aspects of the program have been adversely affected by the growing demands of other missions.... The Coast Guard's relationship with the public has suffered in the past several years as a result of law enforcement efforts and the non-emergency assistance policy.... With new technologies, we have significantly improved our detection capability particularly at night but our ability to predict the drift of search targets is still weak. In search planning and coordination, and detection of small targets on the ocean surface, the U.S. Coast Guard remains the recognized leader both nationally and internationally.... Although recreational boats have become faster and coastal waters more crowded resulting in some dramatic/catastrophic accidents, boaters in general are better prepared and equipped (improved radios and

navigation equipment, more complete outfit of safety equipment). This is likely the result of an effective boating safety awareness program and the realization by boaters that may very likely have to pay for non-distress assistance.

A cadre of outstanding junior officers and petty officers still serve as the backbone of the Coast Guard's search planning and rescue coordination system. Many senior SAR officers often are not fully aware of the problems faced by the SAR controllers. The conference served to make all those attending more aware of the roles and concerns of both the SAR support and operations staffs and reopened several lines of communications.

Maritime SAR Assistance Policy. Due to restrictions/guidance provided by Congress and the Administration, there remains little flexibility for any further change to the existing policy. The policy does have some latitude for interpretation to allow common sense in arranging the best service to the boater, not competing with commercial enterprise, and attempting to fully employ the CG Auxiliary. Considering the limited and typically over - taxed Coast Guard resources, all other competent resources capable of responding to requests for assistance should be considered part of the maritime SAR assistance system for both distress and non-distress. (!!!!)... We need to put discipline in the system and hold everyone to it (e.g. educate boaters to their right to timely and appropriate assistance. Ensure towers are getting on scene within prescribed time limits usually about 1 hour, track all cases to ensure that assistance is provided). We need to track all cases to ensure they are satisfactorily completed. ...The number of commercial towers appears to be thinning some, but those that remain are generally professionally competent and have a good understanding of CG policy concerning non-emergency assistance. ... Comms watchstanders should not be put in a position of interpreting policy. These decisions are better made by the Group OOD or a senior petty officer at the station. ... Although the Coast Guard does not do pure salvage, we do save property in distress if it can be done safely with no threat to life. Clearly we do have a mandate to save both life and property. ... Calls for assistance should initially be considered distress until proven non-distress, instead of the reverse. Watchstanders should not be intimidated by an aggressive commercial tower or apprehensive about taking positive action when appropriate. Err in favor of safety if in doubt. ... The policy has created a public relations problem compounded by adverse publicity concerning our law enforcement activities. ... Many conference attendees felt that the challenge presented by the policy was not just to maintain the vitality/morale of the Auxiliary, but to protect the future survival of the CG SAR program.

Full Employment of the Coast Guard Auxiliary. Every effort should be made to expand the use of the Auxiliary. Although their involvement in non-distress assistance has been limited by the activity of commercial towers, Auxiliarist's participation in other programs should be aggressively supported and encouraged. Response to distress calls, tracking of activated ELT/EPIRB's with portable DF gear, increased patrols (preventative SAR), augmentation at stations (communications watchstanding, boat crew, admin support), and training are only a few examples of the areas where the Auxiliary can be effectively employed. ... We want to take every opportunity to increase both regular Coast Guard and Auxiliary presence on the water.

Operations Centers. There was a great deal of concern expressed that OPCENs and controllers are being buried by a diversity of missions and equipment. Each program finding its way into OPCENs seems to bring with it a new computer, printer and phone system. OPCENs may be serving too many masters. There is a need for better coordination to improve multimission performance. The complexity and variety of distractions can have a significant effect on the ability to effectively and efficiently carry out any single mission. ... The administrative burden at OPCENs needs to be reduced. ... There was a feeling that G-T may be the right manager of hardware/software but would not be the right choice as operational manager of OPCENs. The overall operational requirements for OPCENs need to be more fully developed, then coordinated and standardized to minimize duplication of effort between programs. G-T is presently working on a project to standardize OPCENs. ... Assignment of petty officers in the radarman rate to OPCENs would be beneficial due to the increased MDZ and tactical data activity. ... There was a lot of interest expressed for an electronic bulletin board system tying OPCENs together.

Support for Stations. An overview of maintenance and operational readiness at stations provided by BMCM Mason from the MLB Standardization Team, based on his recent visits to several stations, was a real eye-opener for many attendees. Statistics showing the percentage of boats and crews found not ready for operations highlights a need for much

ready for operations highlights a need for much greater awareness by Groups and District (osr)s. BMCM Mason felt that there were too many discrepancies (engineering & training) and that overall there was a lack of command emphasis and senior petty officer involvement in boat operations. Groups (particularly engineering staffs) need to provide more direct support to stations. ... Some supposedly-qualified MLB crews have, On occasion, averaged less than 2 hours per month underway. ... Groups should make an effort to help reduce the supply, administrative, and budget management burdens at stations. ... Each District representative expressed a concern for the level of maintenance support that the MLCs and SICP have been able to provide under the new organization. One of the most urgent requests was a need for relief from the requirement for central overhaul of UTB/MLB engines. ... There is a need for more standardization of our boats. The Coast has an unnecessarily diverse variety of boats at stations. ... Most felt that too many man-hours were spent at standard terminals filling out reports and that there is an unnecessary duplication of information. Districts' requirements for SITREPs and other message traffic could be reduced. ... A working group was created and met in early April to study workloads at stations and recommend ways to more effectively utilize assigned personnel. The group produced an invaluable document recommending changes to station management and operating procedures. Several of their recommendations have already been acted upon, and an implementation plan was developed for the rest.

SARSAT/EPIRBs/ELTs. The difference between false alarms and false alerts was emphasized with the former identified as a much bigger problem. False alerts affect decision-making process, while false alarms should not. ... Many attendees expressed great concern with new COMDTNOTE 2400 requiring the report of a violation in all cases when EPIRBs/ELTs are activated in other than distress or emergency situations. CG will further alienate the public with this violation policy. ... SARSAT coverage will be increased with the addition of 5 new Local User Terminal (LUTs) over next several years. ... The advantages of 406 MHZ beacons were reviewed. There are no false alert problems with 406 MHZ distress beacons since satellites only relay coded signals. They also provide a more accurate position and have a broader coverage area. There is no reason to hesitate in responding to a 406 MHZ first alert. Every opportunity should be taken to make the mariner more aware of the advantages of the 406 MHZ beacon. Unfortunately they are also more expensive. ... The U.S. Mission Control Center (USMCC) will be transferred to NOAA in Oct 89. NOAA is also completing the final stages of SARNET integration in preparation for the transfer of USMCC. All RCCs are expected to go operational with NOAA at that time.

National SAR School. There was a great deal of interest and support for expanding the scope of the SAR School to provide a broader range of services to the SAR program, and a possible name change to "National SAR Institute" or "National SAR Center". Some of the added responsibilities suggested for the school were to serve as national SAR expert answering questions from the field, maintaining a comprehensive reference library, and evaluating new techniques and practices; interact frequently with the RCC/OPCENs and the support staffs at the R&D Center, Operations Computer Center (OCC), and Headquarters; provide on-site refresher courses and standardization team visits to OPCENs; serve as editor/publisher of ON SCENE magazine; complete update/changes to the National SAR Manual and its addendum; take the lead in interservice Combat SAR Planner training; offer OPCEN course with command and control training; and expand their role in interagency and international liaison.

What is a SAR Case? There was a great deal of interest in providing a more precise definition of what constitutes a SAR case. With SARMIS, any response to a request for assistance (e.g. 2 minutes spent providing weather information) could legitimately be classified as a SAR case and require formal case documentation in SARMIS. Prior to SARMIS, actions by station personnel were only classified as a case if a resource was employed (e.g. boat underway) or 60 minutes or more of administration/communications time was spent responding to a request for assistance. In response to discussions and comments offered at the conference, a new definition of a case has been proposed. To be classified as a case, action in response to a request for assistance must involve one or more of the following: movement of a resource (boat, aircraft, vehicle), referral of a case to another responder and/or broadcast of a MARB, or 30 minutes or more of administrative time or communications support. This definition has been passed to each District office requesting their comments. If no significant problems are identified, this definition should be approved for use for the FY90 SAR data base.

New Technologies. R&D Center and International Ice Patrol researchers provided an overview of findings from the probability of detection project, discussed shortcomings in our ability to predict the drift of search objects and efforts they are making in improving this, and provided a review of environmental products both now and soon to be available that should prove useful in search planning. Drift prediction continues to be a challenge. The OPCEN abreast of technologies and being made aware of conclusions from research and development efforts that might affect search planning. They are also interested in the availability of environmental data and information on how to effectively employ new technology. They don't want to have to wait to see this information published in changes to the SAR Manual. Future editions of ON SCENE Magazine will include a section on SAR R&D efforts and new technologies. These updates will be written in layman terms avoiding the use of technical jargon. ... In response to a request from several of the controllers, a select project proposal has been submitted to study the leeway drift of a person in the water wearing a survival suit. ... A new comprehensive SAR project has been introduced that will look at all phases of the SAR problem (initiation, planning, search execution, rescue/recovery, post-case analysis). Preliminary work on this effort began during this summer. ... R&D Center work continues on the development of a more reliable and useful datum marker buoy (e.g. RDF, LORAN-C, ARGOS) and of an expensive unit built DMB. ... New water temperature survival graphs were distributed at conference. These will be included in the upcoming change to the National SAR Manual.

Computer Assisted Search Planning (CASP). CASP has developed some serious shortcomings and lags behind state-of-the-art technology. It is badly in need of a major upgrading/updating. ... The system has no wind and current data for some areas (western portions of PACAREA AOR) and inadequate environmental data available for many others. Some efforts have been made this summer to improve the CASP wind and current files. ... There is presently no on-going validation system in place for CASP. The program requires the attention of a professional system analyst to conduct validations and routine maintenance. ... The program is slow, difficult to use and not error free. Some of the peripheral improvements needed are better user interfaces, upgraded end products (e.g. graphic displays), different entry levels for Groups/Districts, and standard format for search completion input.

Other issues discussed during the conference included AMVER, The Operations Computer Center's move to Martinsburg, West Virginia, in FY91, Coast Guard's public image, USAF responsibilities for inland SAR and their cooperation with USCG, upcoming change to the SAR Manual, SARCAP, use of SAR personnel for MARDEZ exercises, flare policy, unique identification light for CG Auxiliary boats, CG's role and declining leadership position in international SAR, language barriers in D7 and D8, and use of flight surgeons. There were a total of 65 scheduled agenda items covered at the conference.

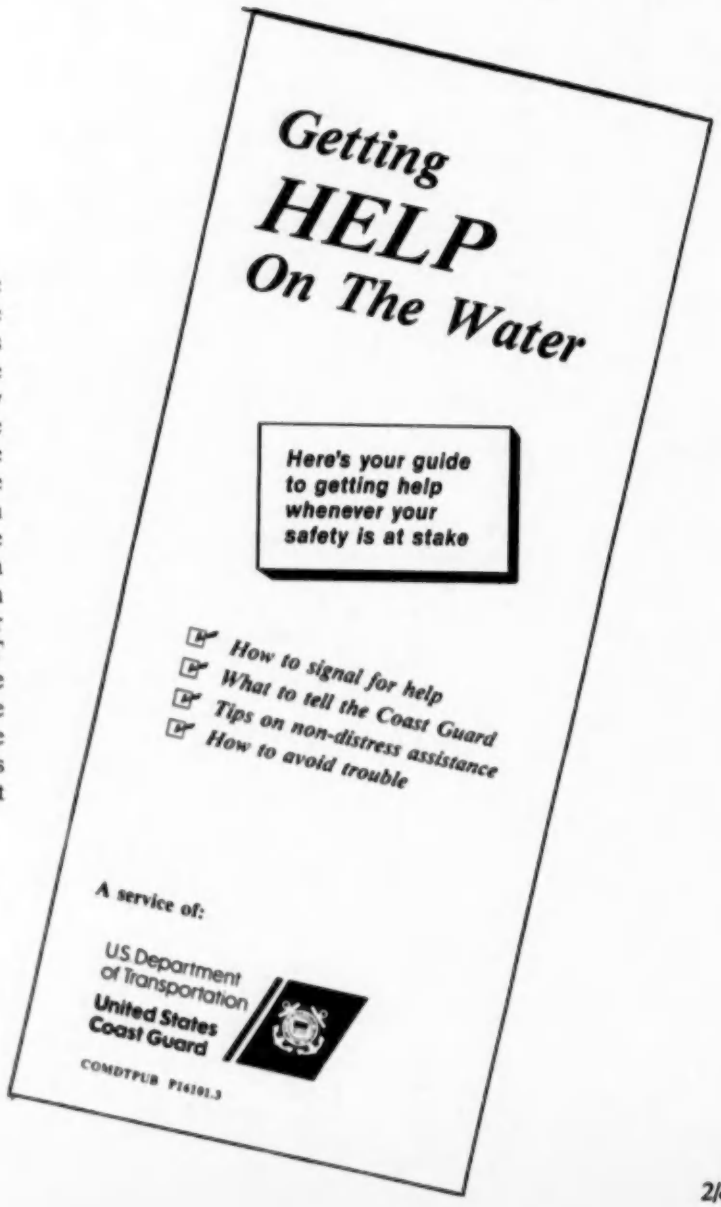
The 70-plus attendees unanimously agreed that the conference was very worthwhile and similar meetings should be scheduled at least every two years. In the years between the larger SAR conference, Headquarters and several support commands plan to sponsor smaller working groups to discuss more focused issues and concerns. During FY90, three such meetings are tentatively planned. This November, a working group to evaluate the future of CASP will meet in Groton, Connecticut. A spring meeting of OPCEN control-lers is being considered. And late in FY90, oceanographers at the CG R&D Center and CG Academy plan to sponsor a small conference on the application of marine science to Coast Guard missions.

NEW PAMPHLET.. COMDTPUB P16101.3

"GETTING HELP ON THE WATER"

By: LT R.R. Schaefer G-NRS-1

This pamphlet provides the public information on getting help on the water. It includes definitions of distress and non-emergency situations and the procedures the Coast Guard will follow for each. This new version replaces the original pamphlet produced for the spring boat shows. Included is some rewording to clarify the information and a more attractive look to catch the eye of the public. This new version should be ordered and the old version discarded. Coast Guard Units order the pamphlet through the DOT stockpoint. Coast Guard Auxiliary use normal ordering procedures. The pamphlet is packaged and must be ordered in packs of 175. Others interested in the pamphlet may request it from Commandant (G-NRS-1).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Commandant (G-NRS-2)
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U.S. Coast Guard Headquarters
2100 Second Street, S.W.
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